REACTOR

NO. 1

$2.95 USA
$3.95 CAN

DIGITAL™

BUILT FOR PLEASURE! PROGRAMMED FOR DESTRUCTION!

DONNA MATRIX™

SHE'S THE PERFECT KILLING MACHINE!

ACTION-PACKED FIRST ISSUE!

AGES!

FULL COLOR!

3D GRAPHICS!

ALL-DIGITAL!

An Interactive Movie on CD-ROM!

BEST CD-ROM

"...a dazzling multimedia science fiction novel that tips its hat to pulp classics while showing us the way to the future... perhaps the best reason yet to hook up a CD to your Mac."

– Steven Levy
MACWORLD

"Spaceship Warlock is an excellent excuse for buying a CD-ROM drive."

– Tom Moran
MACWORLD

"The overall design of the CD-ROM is brilliant – well conceived and meticulous in its design."

– MACWORLD U.K.

"4½"

– MACUSER

"This three dimensional science fiction world you move through as if you are an active participant may not be virtual reality, but Spaceship Warlock could be the next best thing."

– NEW MEDIA

"Everyone agrees: Spaceship Warlock is a hit... a milestone in the progress of interactive media."

– Tony Bove & Cheryl Rhodes
– INSIDE REPORT

"It heralds the next generation of computer entertainment."

– Craig Crossman
– THE MIAMI HERALD

SPACESHIP WARLOCK™

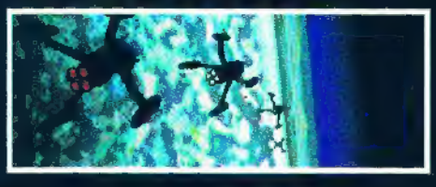
Robustly detailed and dazzling in its sweep and depth, SPACESHIP WARLOCK™ is a blazing, swashbuckling, wonder-filled science fiction epic in the grand tradition! Advanced graphics, 3D animation, and an original music score combine to create a cinematic adventure in which YOU become the central character! SPACESHIP WARLOCK is an interactive saga that you can experience again and again!

You are aboard the Spaceship *Belshazzar* out of Stambul when the pirate ship **WARLOCK** attacks. The dark ship shrugs off the Belshazzar's heaviest weapons and the marauders pour through the hull. Captured and taken aboard the pirate vessel, you are about to embark on a journey beyond imagining, a journey across the galaxy in the ultimate adventure...

Get the award-winning, best-selling CD-ROM created by Reactor! Spaceship Warlock features megabytes upon megabytes of breathtaking art and animation. Presented in a wide-screen letterbox format, it's a virtual walk-through adventure simulation light years beyond anything you've seen before!

REQUIREMENTS

Macintosh - 8-bit color, 13" monitor, 3.5 megabytes of free RAM, CD-ROM drive.
PC - IBM or 100% compatible 386 or higher with 4 MB of RAM, CD-ROM drive, Windows 3.1, Super VGA (640x480, 256 colors), SoundBlaster®/Pro® or 100% compatible MPC sound card.



REACTOR

BOOT UP

DONNA MATRIX

Created with advanced computer 3D modeling and imaging, DONNA MATRIX arrives as a breakthrough in the history of comic books. Mankind's first written communications were pictures. We've gone from cave art to the printing press to computer generated graphics faster than it takes to make a rock.

Computer Graphic Imaging (CGI) has evolved to the point that millions of artists, animators and graphic designer are using computers on a daily basis for the creation of dynamic imagery. Comic books are still, almost entirely, drawn and lettered by hand. Many firms still perform color separation by using mechanical, not digital processes. DONNA MATRIX is the first digital comic.

REACTOR, a new label on the comic book scene, breaks out of the pen and ink strait jacket. Adapting computers for graphic story telling creates a bold new palette for comic book artists. With the artistic freedom of advanced computer 3D modeling and imaging, Digital Comics heralds a new era of comic book entertainment.

DIGITAL COMICS: RIDING THE WAVE

By 1983, Mike Saenz found the tedious constraints of developing and publishing comics frustrating. He realized computers could free him as an artist. However, the software technology of the mid-eighties was not evolved to where his imagination could take him.

Knowing this, he spent the next ten years working in the computer industry. In 1984, using a first generation Macintosh computer, Saenz created SHATTER #1. As the first computer generated comic book, SHATTER attracted lavish media attention and broke all sales records among the independent comic publishers of the time.

Comic Works, the first computer program for creating comic books, was designed by Saenz in 1985. A year later, Saenz consulted on Kaleidoscope (Pixel Craft), a trailblazing method of coloring convention comic art. That system is used throughout the comic book industry today.

Continuing to break new ground, Saenz created IRON MAN: CRASH (Marvel Comics), the first full-color computer generated graphic novel. A landmark in desk top publishing, the IRON MAN graphic novel pioneered full-color pre-press lithography for desk top systems.

BREAK OUT

After years of work, Saenz was ready to explore his own ideas. Fired with what he imagined computer entertainment could be, Saenz founded his company, REACTOR, in 1989.

REACTOR lead the field with innovative CD-ROM games. Virtual Valerie in 1990 and Spaceship Warlock in 1991 are international award winners.

Saenz had finally achieved the command of the software and technology and the independence he needed to fulfill his long held dream. Digital Comics was born.

VIRTUAL MOVIES

Watching a Digital Comic being created is like being on a virtual movie set. Constructed within a computer are three dimensional sets and 3D characters. Artificial lights are positioned and a virtual camera is maneuvered within the computer generated environment to capture the images.

Unlike conventional hand drawn comics, CGI artists aren't limited to the first, fifth, or fiftieth draft. The artist is free to choose from an unlimited number of examples to find the perfect frame.

Lush and robust art work is the vivid hallmark of computer graphic imaging. The crisp, clean graphics seduce the reader into the illusion of a photorealistic comic book world. Compelling pictures are just the beginning. Starting with engaging stories, Digital Comics emphasizes the cutting edge of comic books.

The Digital Comics team is made up of skilled veterans from the comic book and computer software industries. Liberated with the CGI technology, the team is devoted to exploring the exciting new potentials of digital graphic design and computer graphic story telling. Join us in the adventure!

--Robert Carr

DIGITAL COMICS™

DONNA MATRIX™

CREATED AND WRITTEN BY
Mike Saenz

ART • LAYOUT • COMPUTER IMAGING
Norm Dwyer

3-D MODELING
Norm Dwyer
Joseph Allen
Mike Saenz

GRAPHIC DESIGN
Norm Dwyer
Mike Saenz

Joseph Allen

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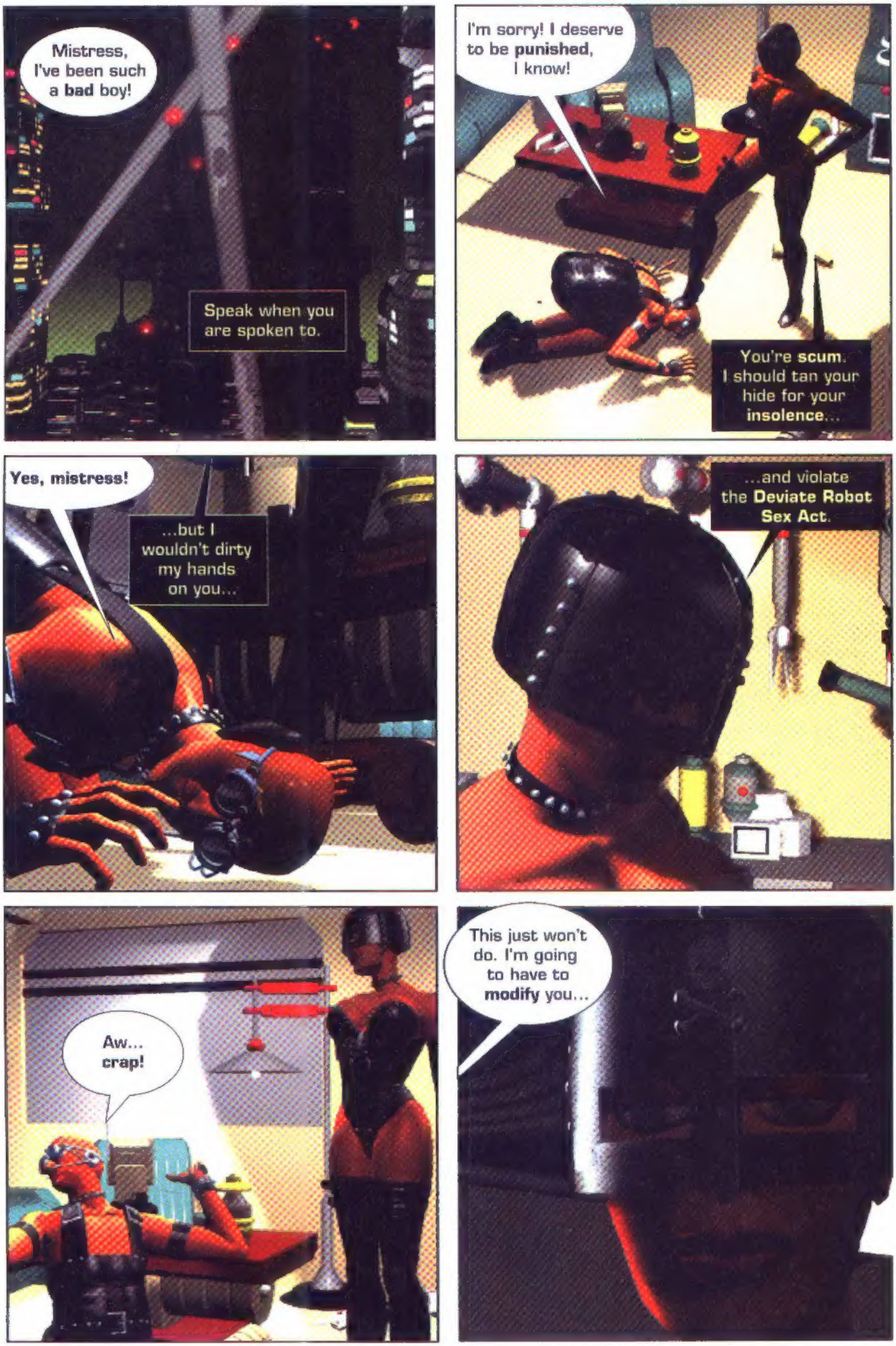
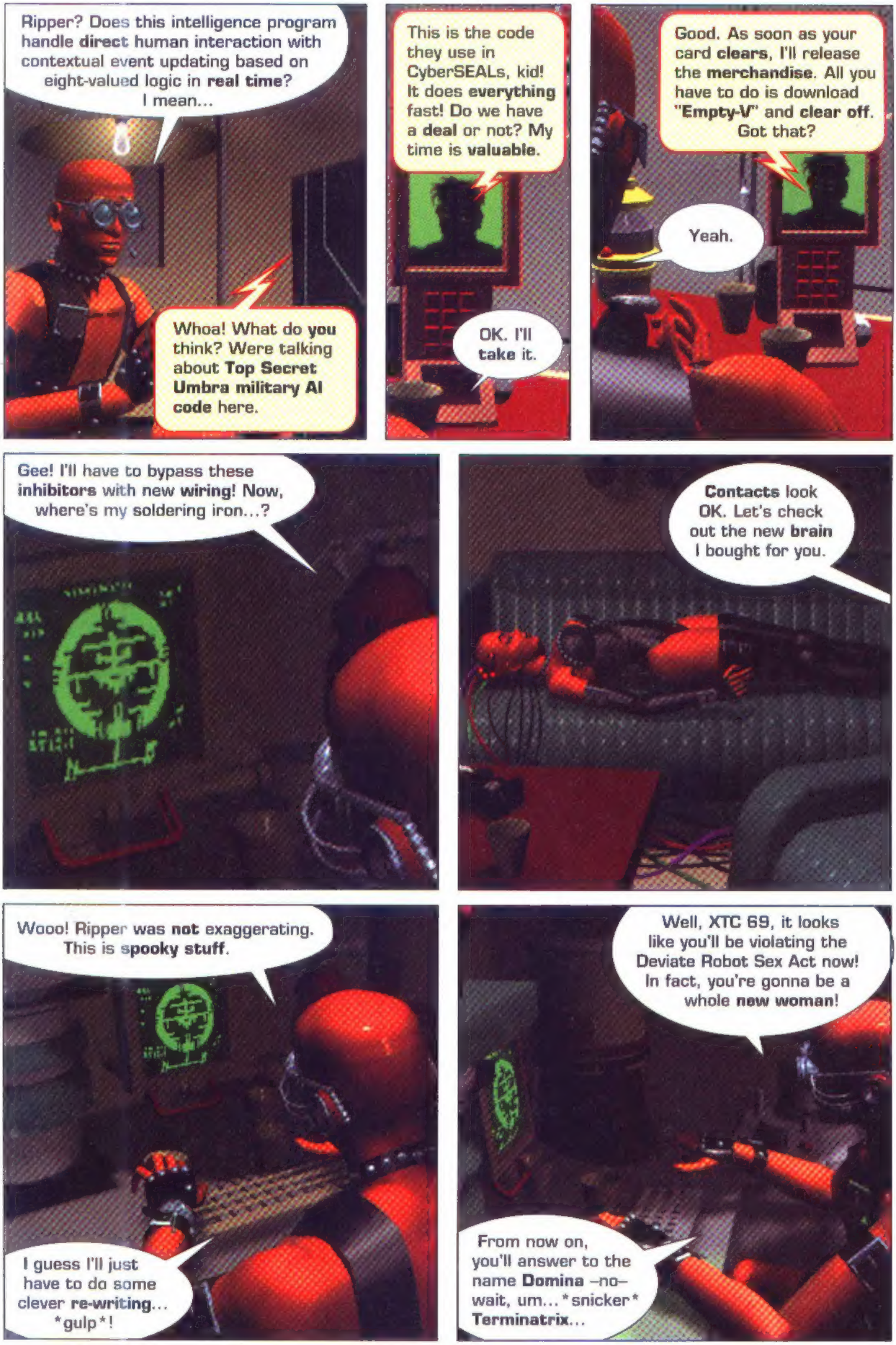
"They don't eat, they don't sleep, and they don't hen-peck. You gotta feed them some juice now and again, but otherwise they're completely worry-free, OK?
"They also work for you — so the fringe benefits are great. They're well-worth the investment, heh.
"So, don't take my word for it. Alright?
"Over 90 million units have been sold to date...
...so, I guess we're all bats and you're a smart guy. I've got paying customers waiting, OK pal?"

Gorgeous Gadgets
Can I help you?
Um...yes. I'm looking for a pleasure droid.
Were you interested in the Mechanical Mistress line? Or...
I'm looking for an XTC 69 unit.
The XTC's are built like trucks. If you ask me, they're not very responsive.
They're made for heavy duty. We usually rent them out to fraternities...
...athletic teams...
That's fine.

There.
The entire XTC line was **discontinued**. All I have are **last year's models**.
This is an **XTC 69** right here. I'll boot it up for you.
WHIRRR!
Your basic **Sexpert O/S** is included...
...special performance modules are **extra.**
Uh huh...
Do you have any...**discipline** modules?
Physical punishment routines are **highly illegal**, sir.
They're wired to **reject** that.
How about a **verbal abuse** module?
Wrap it up!


Mistress, I've been such a **bad** boy!
Speak when you are spoken to.
I'm sorry! I deserve to be **punished**, I know!
You're **scum**. I should tan your hide for your **insolence**...
Yes, mistress!
...but I wouldn't dirty my hands on you...
...and violate the **Deviate Robot Sex Act**.
Aw... **crap!**
This just won't do. I'm going to have to **modify** you...


Ripper? Does this intelligence program handle **direct** human interaction with contextual event updating based on eight-valued logic in **real time**? I mean...
Whoa! What do **you** think? Were talking about **Top Secret Umbra military AI code** here.
This is the code they use in CyberSEALs, kid! It does **everything** fast! Do we have a **deal** or not? My time is **valuable**.
OK. I'll **take** it.
Good. As soon as your card **clears**, I'll release the **merchandise**. All you have to do is download "**Empty-V**" and **clear off**. Got that?
Yeah.
Gee! I'll have to bypass these **inhibitors** with new **wiring**! Now, where's my soldering iron...?
Contacts look OK. Let's check out the new **brain** I bought for you.
Wooo! Ripper was **not** exaggerating. This is **spooky stuff**.
I guess I'll just have to do some clever **re-writing**... *gulp*!
Well, XTC 69, it looks like you'll be violating the Deviate Robot Sex Act now! In fact, you're gonna be a whole **new woman**!
From now on, you'll answer to the name **Domina** –no– wait, um... *snicker* **Terminatrix**...

Much later...
Mistress **Donna Matrix**, I've been such a **bad** boy!
WHIRRR!
You disgust me...
Yes!
It works! The domination routine works! Now let's see if she'll escalate to physical abuse when the commando program kicks in!
Scum.
Yes, mistress! I **deserve to be punished!!!**
KRAK-K!
YOW!!!!

Jeezus! You almost killed me, you stupid piece of junk!
I'll have to turn you off and debug your–
WHACK!
Gnnng!
Oh God, *choke* no!
NOOOO!
GLUK!

DONNA MATRIX

"Leibniz [illegible] mathematical spirit, saw in the mystic elegance of the binary system that counts the zero and the one, the very image of creation, the unity of the supreme Being, operating by binary function in nothingness, would have sufficed to bring out of it all the beings." — McLuhan

ZERO & ONE

WHOA!
Hey, Baby! Where's the party?!

Yeah! Come an' party wif me, babe!
Gak-k!
You've been a *bad boy*.
AAAAAAA
...A *VERY* bad boy.

Ho! Did you *see* that, Billy?
She's off her *nut!* Let's *get* her!

Hey, **sugar thighs!** Come down out of there nice and *easy*. He-he.

Don't give us any **trouble** or we'll **mess you up!**

Time to get down.
Slaves, your mistress is not pleased.
Hey-hey-*hey!*
Snork!
C'mon, baby! Let's get *down!*
Yes. Get down.
and *spit-shine* my boots.
THWACK!
That will cost you...

Oooooff!
KRAK!

SLAM

BLANG
BLANG
BLANG

No...
no...
don't...

BLAANG!

Holy
Frijoles!

STEADICAM
"Now *this* is special. Wonder what her game is?"
AUTO-FOCUS

Nice!

STEADICAM
"What a babe!"
AUTO-FOCUS

...huh?!
WAIT!
BLAAAMM!
VWEEEEEEEEEEEE
ZZZZZT

"Car 104 to Central."
VWEEEEEEEEEEEEEEEE
Car 104 to LaSalle.
Multiple shooting.
Suspect is armed, female, Caucasian, mid-20's, wearing *black leather*...
"We're on it!"
"Suspect is on foot..."
"...and considered *dangerous.*"
Down the *alley–!*

"This is 104! We have her **cornered!**"
"She's on the roof!"
"Give us some **backup!**"

Let's **move!**

Check those corners...

BLANG!
BLANG!

Nnngg!
Whu–!

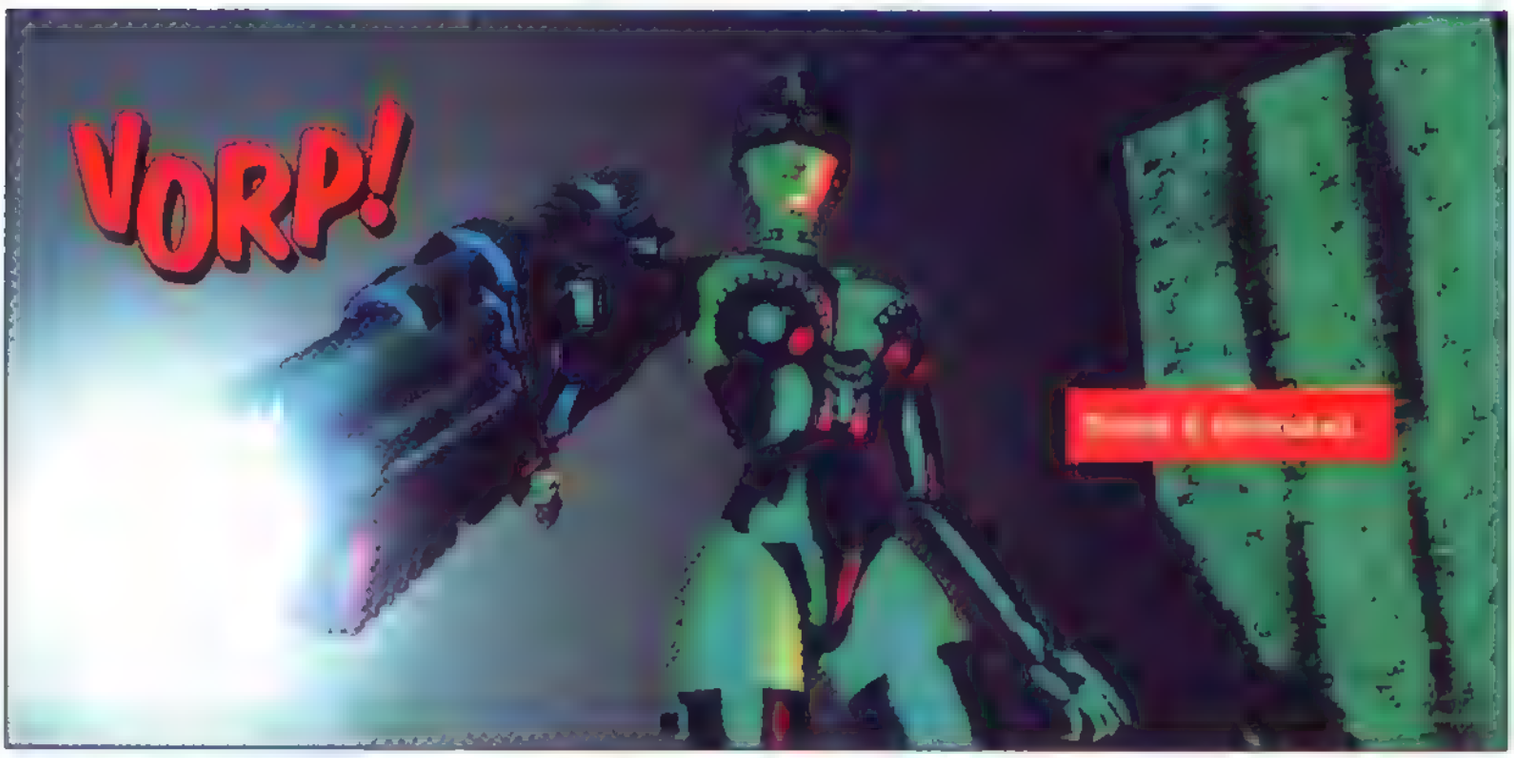
KLIK
KLIK
KLIK
KLIK

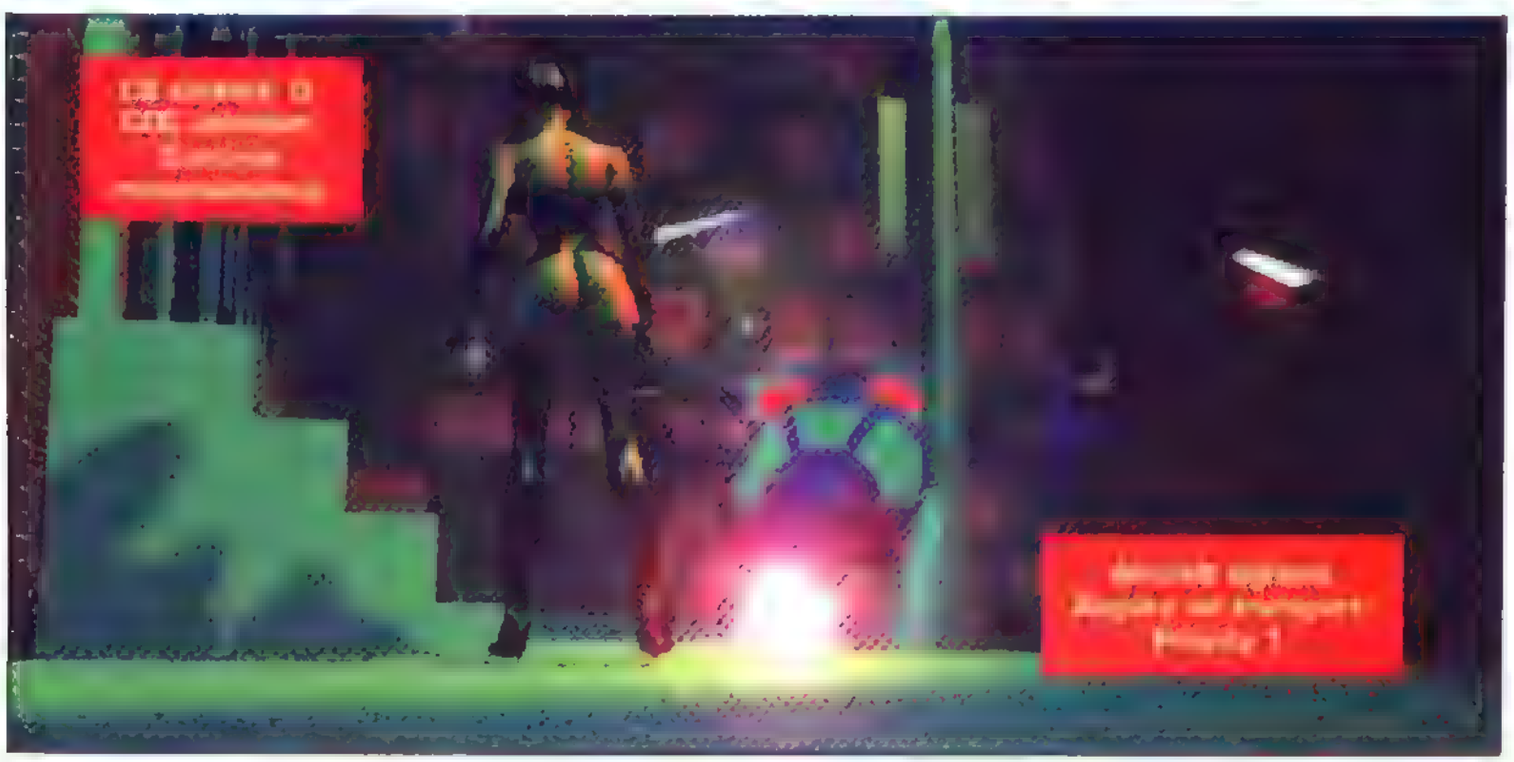
Stay down Al. I've got her now.

Throw down your weapon, and put your hands behind your head.

KRAK
AAAA!

Awoooa...


VORP!



We've spotted her!

DADADADADA
VORP-VORP!
Take her!
SPAK!
AIM FOR HER HEAD!
AIM FOR HER HEAD!!

DADADADA
BLAT-BLAT! BLAT!
Why THAT- -

BLAT-BLAT-BLAT-BLAT
OWW!
I can't SEE!
Something's wrong!
B-DAM!
KA-RAAANGG!

Car 302, come in. Over.
VWEEEEEEEEE

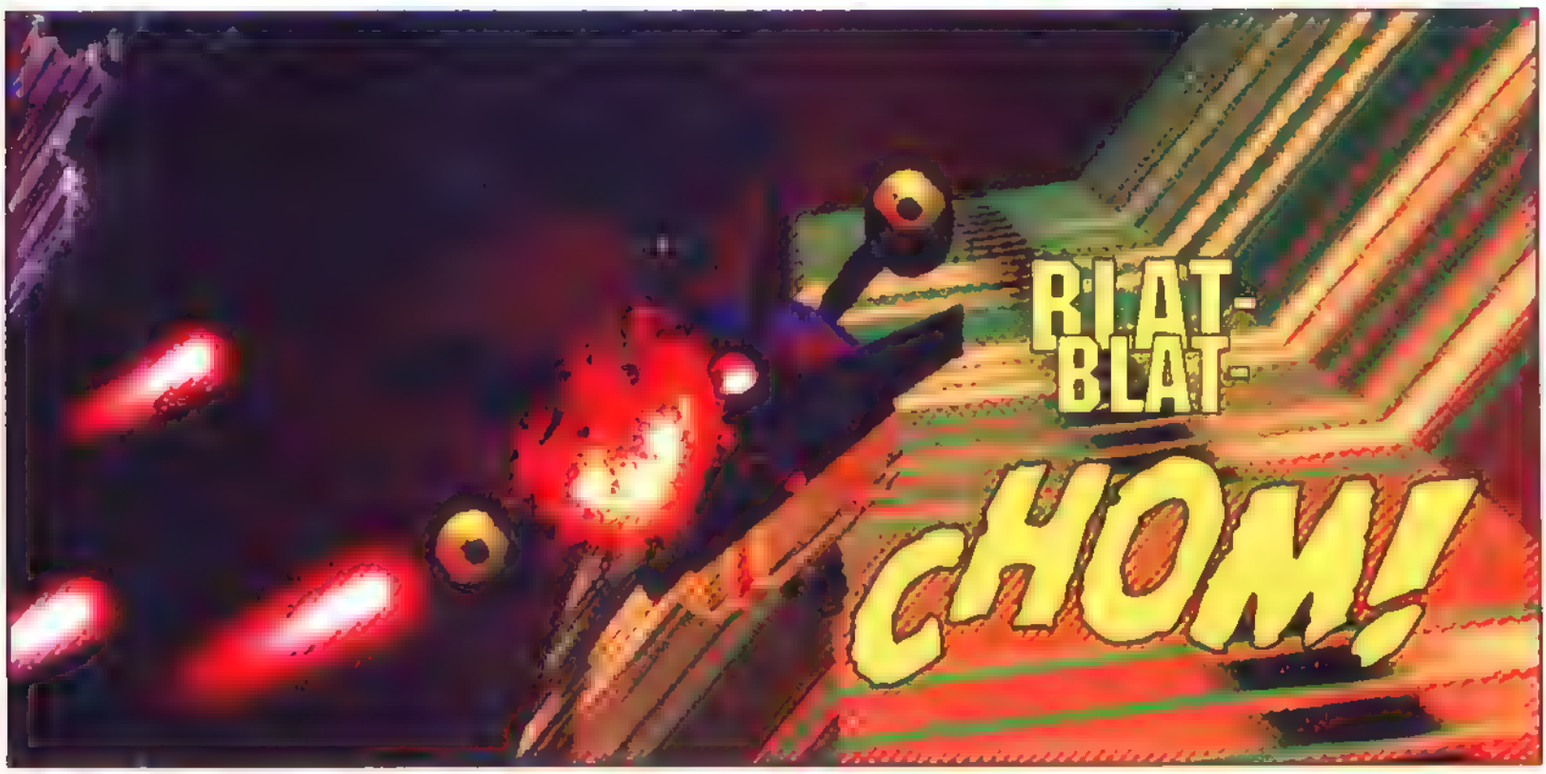
"Big mistake!"
"Car 602 in pursuit. Suspect is flying car 302. Heading..."
"Car 756 in pursuit..."
Do you believe this?
I've got her **targeted.** Just say the **word...**
Ralph, just do it.
Attention all units...
Lost my line.
WHOOOSH!

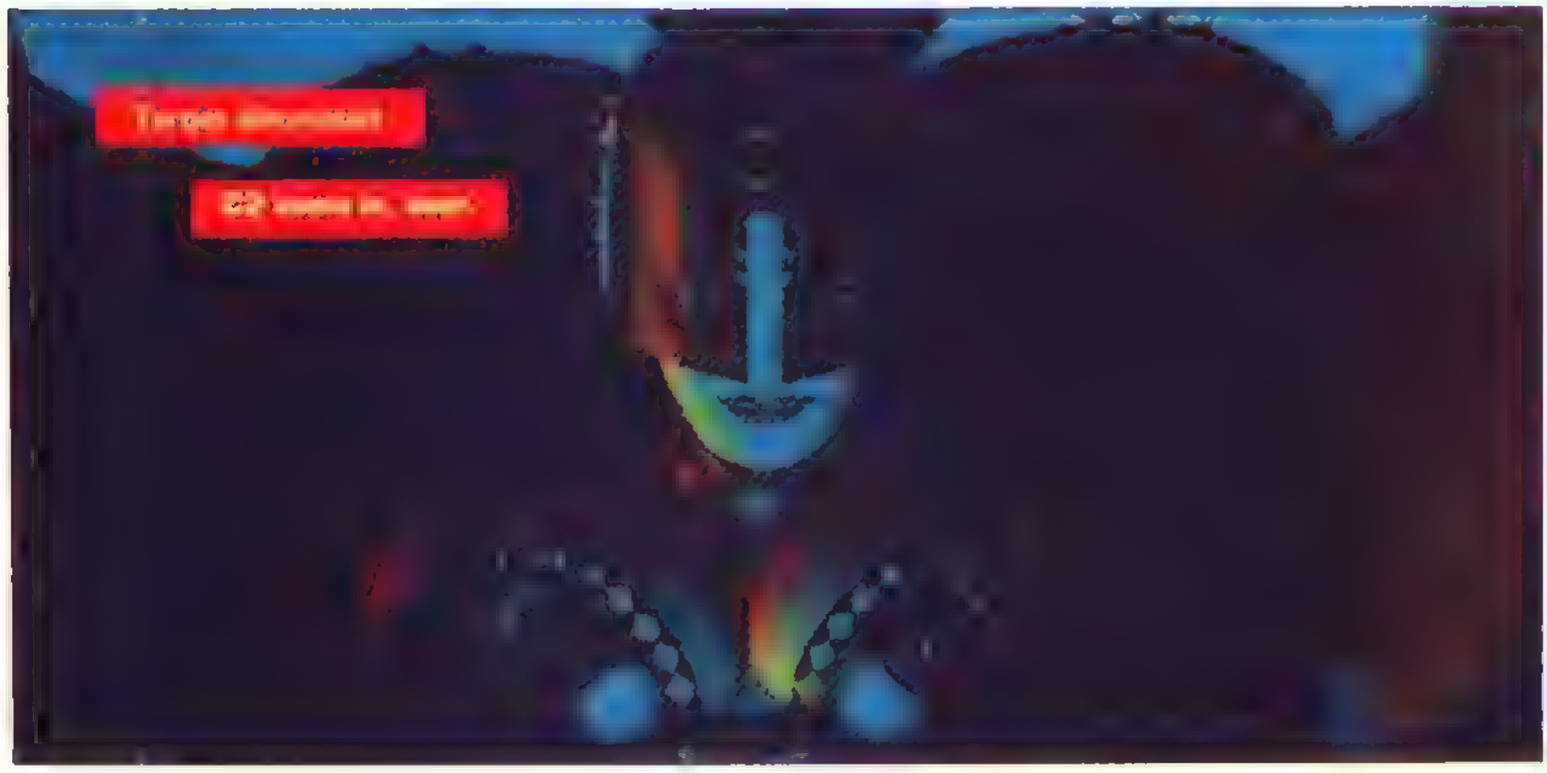
VWEEEEEE
Get after her!

VWIP!
Whoa!

"Where is she?! Where'd she go?!"
"She's moving behind us! Check it out!"
"Break off!"
"Hit it!"
She's behind us!
KLIK
DA DA DA DA

BLAT-
BLAT-
BLA-


BLAT-
BLAT-
CHOM!



B-BLANG!

HOLY- -!

ALRIGHT, you- -

Warning

BUDDA BUDDA BUDDA BUDDA BUDDA BUDDA

BLAT-BLAT-BLAT-BLANG!
NAILED HER!
"Look! She's gonna hit that building!!"
VWRRRRR
KA-DANG!

EEEEEEEEEEEEEEEEE
SMASHH
VWEEEEEE!
Take it down!
Let's jump!

Take the left!
WAIT!
VORP VORP VORP
Whuff!
GAAAA!
BOOOOM!
Police headquarters.
I don't #@%$! BELIEVE it!!

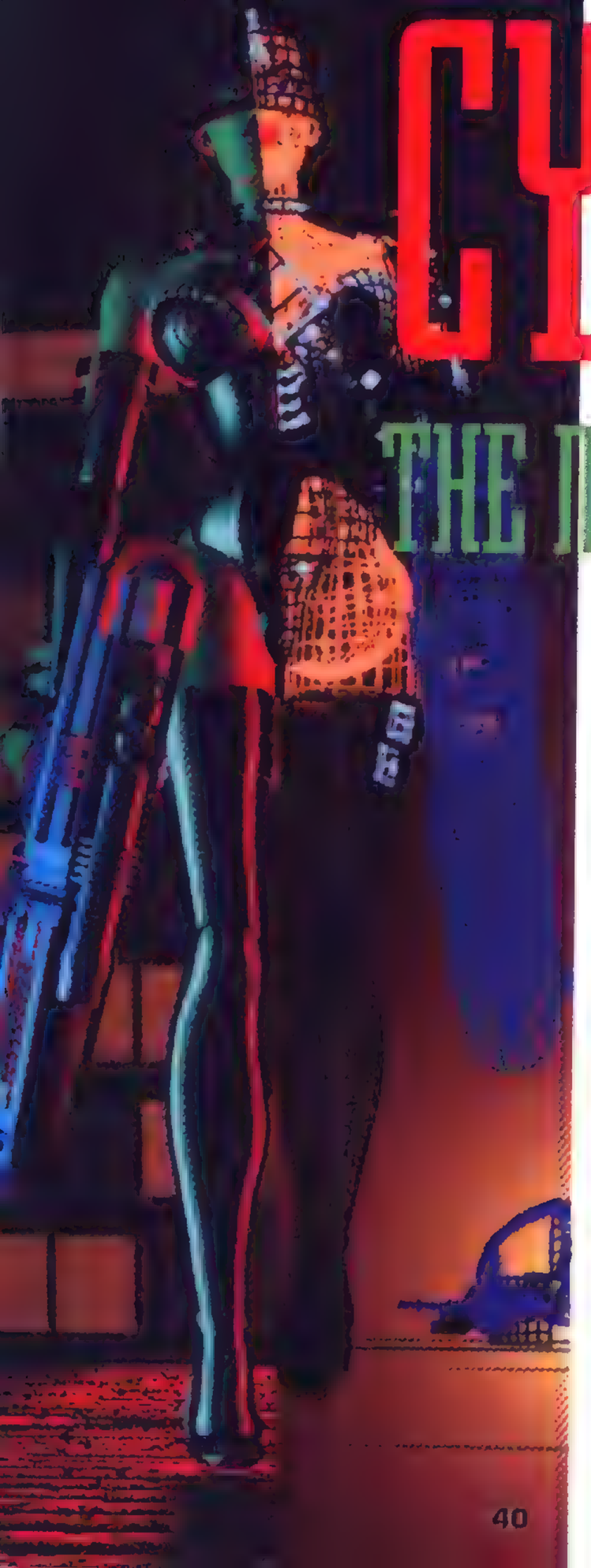
I don't #@%$ *believe* it! This... *thing*...killed *eight* of my patrolmen, murdered *four* individuals, blew up *two* patrol cars, and...
...what *else*, Burke?
We lost a few 886 surveillance and tracking systems in there *somewhere*...
WHAT?!? The mayor is gonna skin me *alive*...
...among *other* expensive hardware. Not to mention the secondary damage to private buildings, *storefronts*...there's a *really big crater* in the road...
That's *enough*, Burke! Geez...
sigh! Look at that *witch!* I'll kill her *myself!* What the *hell* is her *problem?!*
Just some crazy *street meat* with an *ax* to grind...
I'll rip her stinkin' *head* off...
... and *#@%$* down the *hole!*
Call in the *SWATs!*
Just what I need.
Damn.

"That's her!"

"I've got a lock!"

WOOP WOOP WOOP WOOP WOOP

WOOP
WOOP
WOOP
WOOP
WOOP
WOOP
WOOP



CYBERSERK!

THE MAKING OF DONNA MATRIX

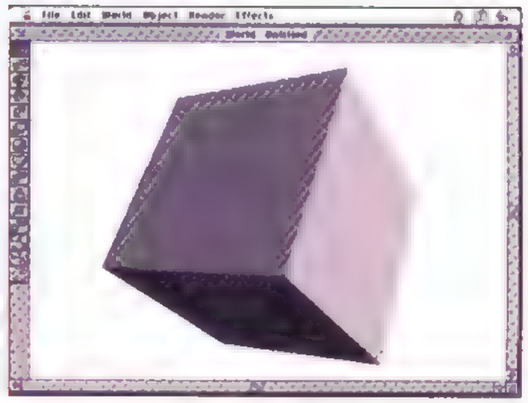
REACTOR has created the first computer 3D generated comic book! Now we reveal how this ground-breaking comic was created.

The name Donna Matrix and the concept of a killer female android was kicking around in Mike Saenz's brain since 1989 but it wasn't until 1993 when the Reactor team began discussing the possibility of creating a line of computer generated comic books that Mike knew exactly what to do with her. It was decided that Donna Matrix, the rogue robot that blazes a trail of destruction through 21st century Chicago, would premiere as the first comic book under the Digital Comics imprint prior to becoming an interactive CD ROM adventure. Mike penned the first issue and outlined an additional 16 issues of Donna Matrix.

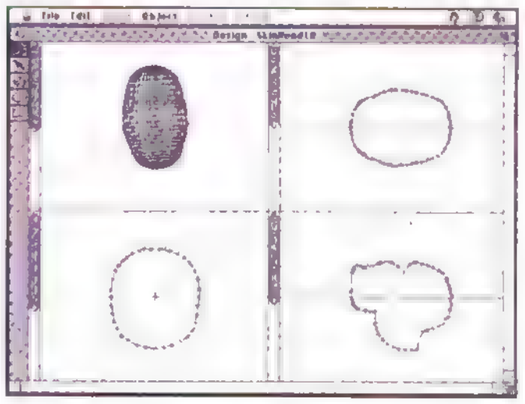
Working from Mike's script, Norm Dwyer storyboarded this first issue and established all of the 3D models in Donna's virtual world. The main characters were the first models constructed, starting with Donna Matrix. As Norm Dwyer designed and assembled all the primary models, Joe Allen modeled the supporting characters and set up basic action sequences while Mike Saenz worked on additional models. All 3D models were constructed over a network of Macintosh® Quadra 950s using Swivel Professional™ software. The entire book was designed and composed in Adobe Illustrator and special effects were added with Adobe Photoshop.

THE DIGITAL COMICS METHOD

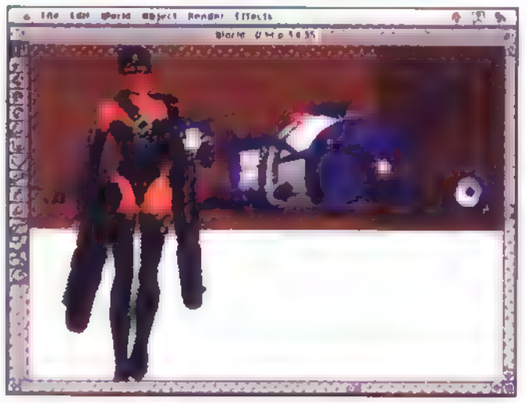
The 3D modeling software's flexibility allows us to construct virtually all the characters based on a single, generic human template. For each character, body parts are reshaped, re-sized, and detailed as needed. Basic colors are assigned to the models and basic scenes are assembled.



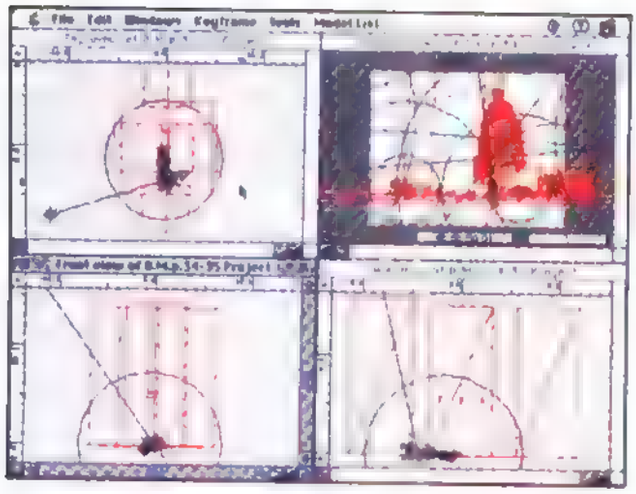
Everything in Donna Matrix is 3-D modeled. Every single model, whether it is a gun, car, arm, or belt buckle, begins life as a simple 3D cube.



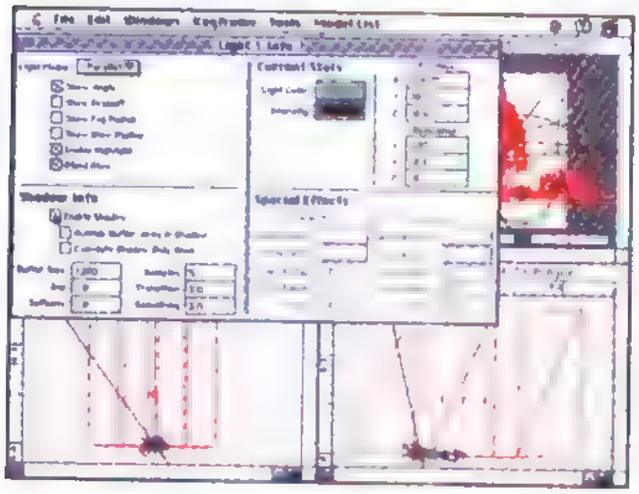
Additional points (3D coordinates) are added to the basic cube. Using 3 different views - Top, Side, and Cross section - the cube is edited, shaped, and refined into a more complex object.



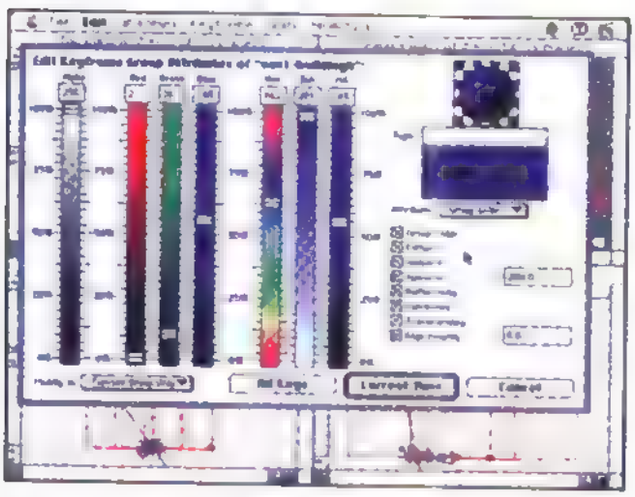
Complex and simple objects are then combined together to make more complex forms. The Donna Matrix model is composed of approximately 275 separate objects (41,237 polygons). From her eyeballs to her spike heels, each object was individually designed and constructed. Like placing an actor on a stage, the resulting model is then positioned within a 3D modeled set.



Once the scene is arranged the models are then imported into the Electric Image Animation System (EIAS) a broadcast quality rendering and animation program



Within EIAS cameras and lights are positioned Cameras can be flown through the scene Unlimited lights can be used and every light can be adjusted for color intensity and range



Every aspect of every object can be adjusted The color reflection transparency and luminance of an object can be completely controlled and edited

CONSTRUCTING SCENES FOR IMAGING AND ANIMATION

MODELS ARE IMPORTED INTO AN ANIMATION AND RENDERING PROGRAM TO GENERATE THE FINAL IMAGES

With our flexibility, it's simple to create basic scenes and to try several variations.

Once we are satisfied with the composition of a scene, we move on to staging

STAGING

Individual scenes are imported into the Electric Image Animation System (EIAS) EIAS enables us to establish the final color of each object of each scene

Then we can set the surface attributes and apply texture maps We can create surfaces that are shiny or matte and establish whether and object is transparent, or opaque, or casts a shadow

LIGHTS

Lights are positioned in 3D space to illuminate the scene. There are several types of lights we can use in EIAS A Radial light (such as a light bulb) can be set to drop off at any radius. Spotlights can be narrow or broad. Tube lights can be any length. Color and intensity can be set for each light

CAMERA

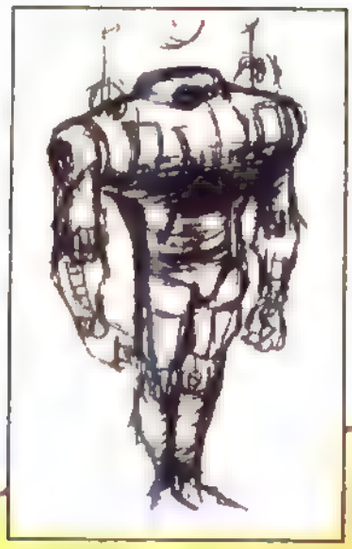
A Virtual Camera is positioned and used to capture the desired view. the camera operates like reality tilting and rolling anywhere in 3D space It can be animated to fly and give a variety of dramatic views of a scene

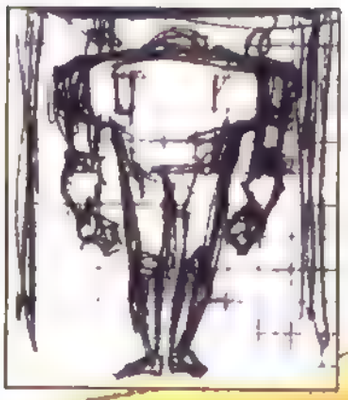
ACTION

Characters can be animated to run jump, kick or punch and vehicles can drive or fly through a scene. Donna matrix, created with animation, is then edited for the most dramatic still frames to create an action sequence

CHARACTER DESIGN

OH, SO PEN AND PENCIL DID HIT PAPER FOR A FEW EARLY CONCEPT SKETCHES ON DONNA MATRIX. WE PRESENT THEM HERE FOR YOUR ENJOYMENT!



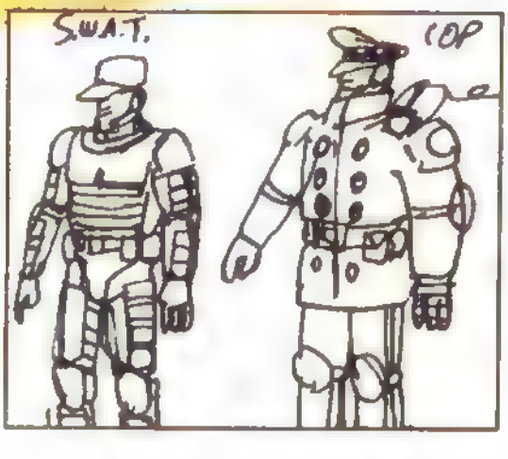


Above are two sketches by Dwyer of the the Cyber-S E A.L. See the last page of this issue for a preview

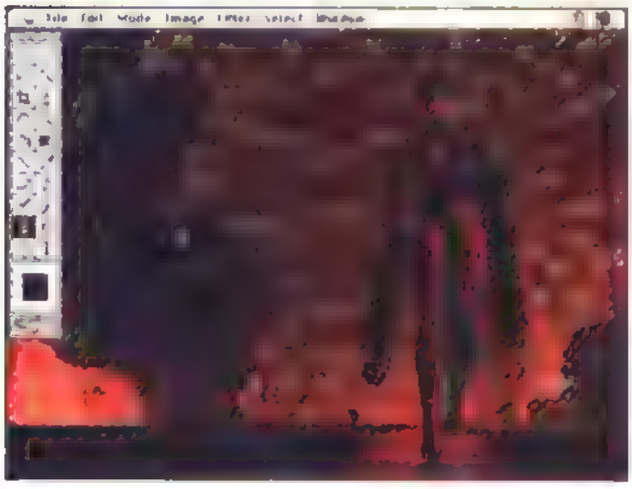
The original design sketch of Donna Matrix by Saenz. This was the basis of the model that Dwyer constructed The final Donna Matrix model remains very faithful to her original design.

Below are a few design sketches of the hacker character and the CPD police uniforms by Saenz

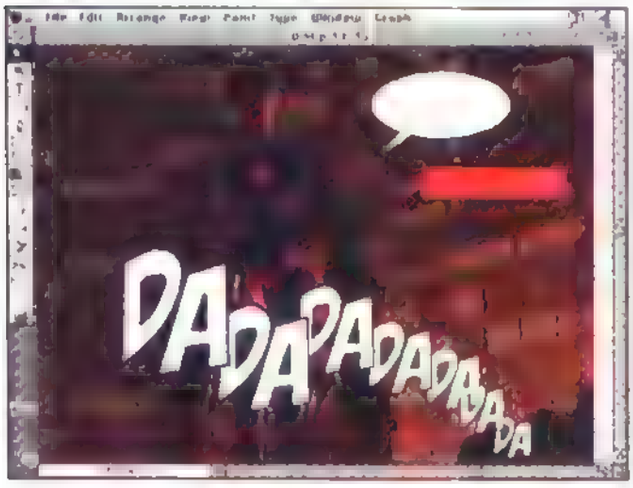
On the left is an early design sketch of the police flyers by Dwyer



A basic 3D scene rendered by ElAS. Fog lights are used to create a haze around the wreckage. An illuminated texture map is used to create glowing windows on the building.



The same scene after image editing. A scan of billowing smoke is composited into the scene and flames are painted into the wreckage using Adobe Photoshop.



The final image is imported into Adobe Illustrator and placed on a page. Balloons, text and sound effects are then added.

IMAGE PROCESSING AND PAGE COMPOSITION

RENDERING

After all the attributes and settings of the scene have been set, the image is rendered. ElAS computes all of the objects' texture maps, bump maps, lights and action sequences automatically. Within minutes, the high-resolution images appear.

IMAGE EDITING

Adobe Photoshop erases imperfections. Smoke, flames, laser blasts, and other pyrotechnics are digitally painted onto the image. Computer 3D can't recreate convincing pyrotechnics. In the example on the left, smoke and fire from two separate stock photos were scanned into the computer and matted into the image.

PAGE CREATION

Once finished, the image is imported into Adobe Illustrator to digitally compose a final page. Word balloons and sound effects are added and can be re-sized or place anywhere on the page. The final page is complete.

DIRECT OUTPUT TO FILM

The pages are digitally separated into the films used to print the book. The original work behind Donna Matrix exists only as stored computer bytes until the first print run.

PROFILES

THE DIGITAL COMIC TEAM

MIKE SAENZ

Mike Saenz is a job creator's nightmare. He's worked professionally as a graphic designer, comic book artist/writer, software designer, computer game designer, animator... the list reads like the Help Wanted ads.

In the middle Eighties, using a Macintosh with less RAM than that of many of today's microwave ovens, Mike produced Shatter, the first computer generated comic book (First Comics, 1985). Mike later went on to found Reactor, Inc., and to produce such award winning titles as Virtual Valerie (Reactor, 1990) and Spaceship Warlock (Reactor, 1991). Mike was recently voted "Most Despised man of the Year" by the organization Mothers Against Everything.

A stickler for detail, Saenz check the integrity of Digital Comics scripts by personally re-enacting them. In the role of Donna Matrix, over four weeks of personal research in the bad parts of Chicago left Mike bruised, battered and requiring more than a few court appearances.

Having come full circle, from Shatter to Donna Matrix, in less than a decade, Mike is the indefatigable father of computer comics although he is still demanding a blood test.

NORM DWYER

Since creating Libby Ellis in 1987 (Malibu Comics) Norm has worked for every major comic book publisher worth mentioning.

Norm went digital in 197? when he first saw a Techtroniks micro computer. Recounts Norm "She had the biggest pair of CRTs I'd ever seen." Norm's love affair lasted through countless interactive media projects until 1992 when he was released into the custody of Reactor Inc. With his keen eye for dynamic imagery Norm screams through cinematic sequences with the vision of a consummate film director on a caffeine overload

Besides being a dedicated technophile Norm is the founder of the CCCP (Creative Cartooning and Comic book Professionals) Norm instigated landmark proceedings when he sued the Soviet Union for using his organization's initials without written permission Norm's victory in the lawsuit eventually led to the complete breakup of the Eastern Bloc countries

As Reactor's Special Projects Manager Norm wears numerous hats all of which are too small for his big head

JOSEPH ALLEN

Joseph Allen has worked as a professional cartoonist since the age of nineteen when he was promised quick money and good times.

In addition to being an accomplished cartoonist, Joe is a talented musician. He entered the world of digital media when he first laid his hands on a Roland TR-909 rhythm composer. Since then, Joe has been an unstoppable groove machine.

After scoring literally hundreds of songs, Joseph's love of music led him to Reactor where he now applies his talents to scoring the music and creating stunning imagery on Reactor's CD-ROM titles.

NEXT ISSUE!
ALL HELL BREAKS LOOSE AS DONNA MATRIX BATTLES THE ULTIMATE KILLING MACHINE:
THE CYBER-S.E.A.L!
...IN THE NEXT EXPLOSIVE ISSUE OF:
DONNA MATRIX

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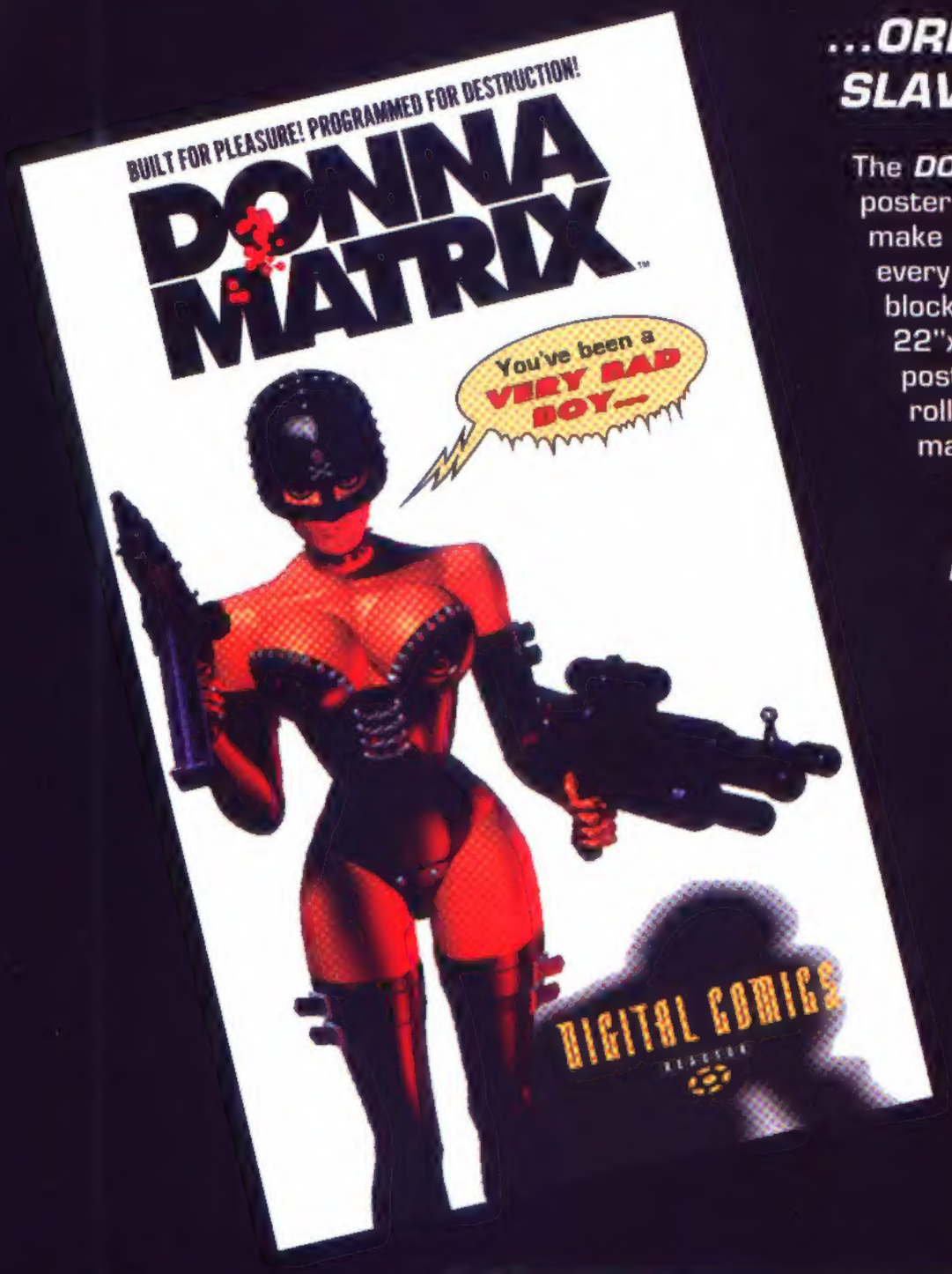

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DIGITAL COMICS

REACTOR